REMARKS

Re-examination and allowance of the present application is respectfully requested.

Initially, Applicant notes that completed copies of the PTO-1449 Forms that accompanied Information Disclosure Statements filed in this application on December 30, 2003; October 28, 2003; and May 19, 2003 have not been returned to Applicants. The Examiner is respectfully requested to return completed copies of these PTO-1449 Forms to confirm his consideration of the documents listed thereon.

Further, Applicant notes that the Examiner has inadvertently failed to indicate his consideration of the Canadian documents listed on the PTO-1449 Form that accompanied an Information Disclosure Statement filed on March 17, 2003. The Examiner is respectfully requested to indicate his consideration of the Canadian documents.

For the convenience of the Examiner, Applicants include copies of the PTO-1449 Forms associated with the above-noted Information Disclosure Statements.

Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claims 2, 4, 5, 9 and 10 as being unpatentable over U.S. Patent 5,852,655 to McHALE et al., hereinafter McHALE, in view of U.S. Patent 6,044,107 to GATHERER et al., hereinafter GATHERER.

Applicant submits that the present invention is totally unrelated to the teachings of the above-noted applied art documents, and thus, believes that the Examiner may not fully appreciate what is Applicant's claimed invention.

McHALE is directed to solving the problem of over-subscribing, that is, serving a large number of lines with a smaller number of modems. As noted at, for example, column 8, lines 13-16, McHALE monitors 1000 lines using 100 modems, in order to determine an

available modem. All 100 modems are of the same type (such as, for example, ADSL). Reference is made to, for example, column 6, lines 45-61 of McHALE, wherein the use of a single xDSL system is clearly discussed. While the invention of McHALE (e.g., dealing with over-subscription) may be useable with different types of xDSL modems, McHALE only discusses that all of the modems are of the same xDSL type. As a result, McHALE is silent with respect to detecting the type of xDSL in order to assign the correct modem, because, as indicated in the specification, the pool of modems are assumed to be of the same xDSL type.

On the other hand, Applicant's invention is directed to selecting a particular xDSL modulation transmission protocol (such as, but not limited to, for example, VDSL) from among a plurality of dissimilar xDSL modulation transmission protocols (such as, but not limited to, for example, ADSL, VDSL, HDSL, FDSL). According to Applicant's invention, an initiating communication device transmits first negotiation information bits that represent what type of dissimilar xDSL modulation transmission protocol capabilities are supported by the initiating communication device. For example, the first negotiation information bits may indicate the initiating communication device supports HDSL, ADSL, VDSL and SDSL. See page 77 and Tables 37 and 38 of Applicant's specification, which discloses that the negotiation information bits include octet SPar(1)s, which is always transmitted, that identify the various dissimilar xDSL modulation transmission protocol capabilities and their respective support. Specifically, each parameter in the octet is assigned a unique bit position, with a binary "1" being assigned when that parameter is valid. In the disclosed embodiment (see Table 38), SPar(1) is coded such that bit position 1 represents the support/non-support

of HDSL, bit position 2 represents the support/non-support of VDSL Annex a, and bit position 3 represents the support/non-support of VDSL Annex B. Thus, when bit positions 1 and 2 of SPar(1) are set to "1", the negotiation information bits transmitted by the negotiation data transmitter of the initiating communication device indicate that xDSL modulation transmission protocols for HDSL and VDSL Annex a are supported, but that xDSL modulation transmission protocol VDSL Annex B is not supported.

The responding communication device replies by transmitting its (e.g., second) negotiation information bits that represent what type of dissimilar xDSL modulation transmission protocol capabilities it supports, such as, for example, FDSL and VDSL. A selector than selects an appropriate xDSL modulation transmission protocol (e.g., VDSL in the present discussion) to establish a communication channel between the initiating and responding communication devices. Applicant submits that this procedure is neither disclosed or suggested by either McHALE or GATHERER.

In rejecting Applicant's claims, the Examiner asserts that McHALE discloses negotiation information bits representing different high speed communication standard capabilities. Applicant submits that this assertion is erroneous. As discussed above, McHALE does not disclose any structure that could be considered equivalent to Applicant's negotiation information bits, in which octet SPar(1)s, which is always transmitted, identifies the various dissimilar xDSL modulation transmission protocol capabilities and their respective support. In fact, McHALE does not detect different type xDSL (e.g., dissimilar xDSL modulation transmission protocols) modems, as all the modems employed in McHALE are of the same type. In this regard, a review of column 17, lines 11-13 of McHALE

discloses that the request for service associated with McHALE comprises an initial tone that is a sinusoid, e.g., an analog signal. Thus, Applicant submits that it is clear that McHALE does not disclose or even suggest the use of negotiation information bits to represent dissimilar xDSL modulation transmission protocol capabilities.

A further review of column 9, line 66 through column 10, line 9 of McHALE discloses that subscriber table 126 of McHALE stores subscriber information, such as, for example, connect time, session duration, session activity logs, , etc. that can be used to generate billing and demographic data on subscribers 12 in system 10. McHALE is totally silent with respect to indicating that the subscriber table 126 stores information representing what type of xDSL modem is used, as such information is irrelevant in a system wherein all of the modems are of the same type. Since all the modems in the system of McHALE are of the same type (e.g., all the modems are, for example, ADSL modems), Applicant submits that there is no need for McHALE to store information on the type of modem.

The Examiner also erroneously asserts that controller 80 of McHALE is equivalent to Applicant's selector. Applicant submits that these elements differ. Specifically, Applicant submits (see, for example, column 8, lines 6-15 of McHALE) that controller 80 of McHALE functions to monitor the large number of lines with a smaller number of modems to determine a need for service on one of the lines, in order to connect one modem to one line. This differs from Applicant's invention, in which Applicant's selector selects an appropriate xDSL modulation transmission protocol (e.g., VDSL) from among a plurality of dissimilar (e.g., ADSL, VDSL, FDSL, etc.) xDSL modulation transmission protocols.

Applicant submits that GATHERER also fails to disclose or suggest that which is lacking from McHALE. In this regard, the Examiner asserts that column 14, lines 61-67 of GATHERER discloses that transmitted data comprises useable allocation information. Applicant submits that this assertion is incorrect. The portion of GATHERER relied upon by the Examiner is directed to the allocation of data bits per DMT carrier, whereas the data associated with the carrier in Applicant's invention pertains to a useable frequency spectrum.

Applicant further submits that GATHERER does not discuss (nor suggest) how to select carriers from a multi-carrier system. Still further, Applicant submits that GATHERER does not disclose/suggest any method for detecting and/or indicating what carriers to use.

Accordingly, Applicant submits that even if one attempted to combine the teachings of the applied art of record in the manner suggested by the Examiner, one would fail to arrive at the instant invention, in which an xDSL modulation transmission protocol common to both an initiating communication device and a responding communication device is selected from among a plurality of dissimilar xDSL modulation transmission protocols. In this regard, Applicant has amended the claims to clarify that the first negotiation information bits represent dissimilar xDSL modulation transmission protocol capabilities associated with the initiating communication device, and that the second negotiation information bits represent dissimilar xDSL modulation transmission protocol capabilities of the responding communication device, in which an appropriate xDSL modulation transmission protocol (that can be performed by both the initiating and the responding communication devices) is selected to establish a communication channel.

In view of the above, Applicant submits that the pending claims are distinguishable from the applied art of record (either individually or in combination), and respectfully requests withdrawal of the 35 U.S.C. §103 rejection and the passage of the application to issue.

Applicant also submits new claims 42 and 43 for the Examiner's consideration. New claim 42 depends from independent claim 9, and specifies that the at least one carrier is transmitted with data related to a useable frequency spectrum carrier allocation. This claim is believed to be allowable for at least the same reasons applicable to claim 9, and further, in view of the above arguments that GATHERER is directed to data rate allocation, and not frequency spectrum allocation. New claim 43 is based upon claim 2, but does not include the frequency spectrum carrier allocation limitation of claim 2. Applicant submits that claim 43 is allowable for the same reasons discussed above with respect to claim 2. Accordingly, the Examiner is respectfully requested to indicate the allowability of newly submitted claims 42 and 43.

SUMMARY AND CONCLUSION

In view of the fact that none of the art of record, whether considered alone or in combination, discloses or suggests the present invention as now defined by the pending claims, and in further view of the above amendments and remarks, reconsideration of the Examiner's action and allowance of the present application are respectfully requested and are believed to be appropriate.

Should the Commissioner determine that an extension of time is required in order to render this response timely and/or complete, a formal request for an extension of time, under

37 C.F.R. §1.136(a), is herewith made in an amount equal to the time period required to render this response timely and/or complete. The Commissioner is authorized to charge any required extension of time fee under 37 C.F.R. §1.17 to Deposit Account No. 19-0089.

If there should be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
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Enclosures (copies):

PTO-1449 Form filed with December 30, 2003 Information Disclosure Statement
PTO-1449 Form filed with October 28, 2003 Information Disclosure Statement
PTO-1449 Form filed with May 19, 2003 Information Disclosure Statement
PTO-1449 Form filed with March 17, 2003 Information Disclosure Statement